

IN THE CLAIMS

1. (Currently Amended) A therapeutic method for treating a bone-associated cancer while reducing the incidence of sustained renal dysfunction comprising:
 - (a) hydrating a human cancer patient;
 - (b) parenterally administering a dose of 650-825 mCi/m² ¹⁶⁶Ho-DOTMP to said patient in an aqueous vehicle comprising an effective antiradiolytic amount of a pharmaceutically acceptable radioprotectant;
 - (c) administering a dose of about 140-200 mg/m² melphalan to the patient; and
 - (d) providing the patient with a stem cell transplant bone marrow transplantation and/or restoration;wherein the patient is not subjected to total body irradiation in conjunction with the therapeutic method.
2. (Currently Amended) The method of claim 1 wherein the patient is refractory to treatment, or in relapse after treatment, with melphalan chemotherapy and/or total body irradiation.
3. (Currently Amended) The method of claim 1 [[or 2]] wherein the dose is effective to deliver a mean dose of about 15-30 Gy to the bone marrow of said patient.
4. (Original) The method of claim 3 wherein about 200 mg/m² melphalan is administered in step (c).
5. (Original) The method of claim 1, 2 or 3 wherein the cancer is multiple myeloma.
6. (Currently Amended) The method of claim 1, 2 or 3 wherein the cancer is metastatic breast cancer or metastatic prostate cancer.
7. (Original) The method of claim 1, 2 or 3 wherein the cancer is Ewing's sarcoma.

8. (Currently Amended) The method of claim 1, 2 or 3 wherein the radioprotectant is an ascorbic acid ascorbate or gentisic acid.

9. (Currently Amended) The method of claim 8 wherein the ascorbate is ascorbic acid at a concentration of ascorbic acid is about 35-75 mg/ml.

10. (Currently Amended) The method of claim 9 wherein the vehicle is buffered to about pH 7-8.

11. (Cancelled) A therapeutic method for treating multiple myeloma comprising:

- (a) hydrating a multiple myeloma patient;
- (b) parenterally administering a dose of ^{153}Sm -EDTMP effective to deliver about 30-40 Gy of radiation to the bone marrow of said patient;
- (c) administering a dose of about $140\text{-}200 \text{ mg/m}^2$ of melphalan to said patient; and
- (d) providing the patient with a stem cell transplant; wherein the patient is not subjected to total body irradiation in conjunction with the therapeutic method.

12. (Cancelled) The method of claim 11 wherein the patient is refractory to treatment, or in relapse after treatment with, melphalan and/or total body irradiation.

13. (Cancelled) The method of claim 11 or 12 wherein about 200 mg/m^2 melphalan is delivered in step (c).

14. (New) A therapeutic method for treating a bone-associated cancer in a human patient comprising:

- (a) parenterally administering a dose of ^{153}Sm -EDTMP;
- (b) administering a dose of about $140\text{-}200 \text{ mg/m}^2$ of melphalan to said patients, wherein steps (a) and/or (b) are effective to suppress the bone marrow of a human patient; and
- (c) providing the patient with bone marrow transplantation and/or restoration; wherein

the patient is not subjected to total body irradiation in conjunction with the therapeutic method.

15. The method of claim 14 wherein step (c) is carried out while the bone marrow is suppressed by steps (a) and (b).

16. (New) The method of claim 14 wherein the patient is refractory to treatment or in relapse after treatment with chemotherapy and/or total body irradiation.

17. (New) The method of claim 14 wherein the patient is hydrated prior to, during and/or after step (a).

18. (New) The method of claim 14, 15 or 16, wherein the bone-associate cancer is multiple myeloma.

19. (New) The method of claim 1 or 14 whereas the bone marrow transplantation or restoration comprises bone marrow transplantation, stem cell transplantation and/or administration of a colony stimulating factor.

20. (New) The method of claim 14, 15, 16 or 17 wherein the dose of ^{153}Sm -EDTMP is delivered by intravenous infusion or injection in an aqueous vehicle comprising an effective antiradiolytic amount of a pharmaceutically acceptable radioprotectant.

21. (New) The method of claim 20 wherein the radioprotectant is an ascorbate or gentistic acid.

22. (New) The method of claim 21 wherein the ascorbate is ascorbic acid at a concentration of about 35-75 mg/ml.

23. (New) The method of claim 14, 15, 16 or 17 wherein the dose delivers about 30-40 Gy of radiation to the bone marrow of the patient.

24. (New) The method of claim 14, 15, 16 or 17 wherein the dose delivers about 15-30 Gy of radiation to the bone marrow of the patient.
25. (New) The method of claim 14, 15, 16 or 17 wherein about 200 mg/m² of melphalan is administered.
26. (New) A therapeutic composition comprising:
 - (a) an amount of ¹⁵³Sm-EDTMP effective for suppressing the bone marrow of a human;
 - (b) an effective antiradiolytic amount of a pharmaceutically acceptable radioprotectant; and
 - (c) an aqueous vehicle.
27. (New) The composition of claim 26 wherein the amount of ¹⁵³Sm-EDTMP is effective to deliver a dose of at least about 15 Gy of radiation to the bone marrow of a human patient.
28. (New) The composition of claim 26 wherein the amount of ¹⁵³Sm-EDTMP is effective to deliver a dose of about 30-40 Gy of radiation to the bone marrow of a human patient.
29. (New) The composition of claim 26 wherein the amount of ¹⁵³Sm-EDTMP is effective to deliver a dose of about 20-30 Gy of radiation to the bone marrow of a human patient.
30. (New) The composition of claim 26 wherein the amount of ¹⁵³Sm-EDTMP is effective to deliver a dose of about 250-3000 MBq/kg to a human patient.
31. (New) The composition of claim 26 wherein the amount of ¹⁵³Sm-EDTMP is effective to ablate the bone marrow of a human.
32. (New) The composition of claim 26 wherein the radioprotectant is an ascorbate or gentisic acid.

33. (New) The composition of claim 32 wherein the ascorbate is ascorbic acid at a concentration of about 35-75 mg/ml.
34. (New) The composition of claim 26 wherein the vehicle is buffered to about pH 7-8.
35. (New) The method of claim 6 wherein the cancer is metastatic breast cancer.

PRELIMINARY AMENDMENT

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Title: SKELETAL-TARGETED RADIATION TO TREAT BONE-ASSOCIATED PATHOLOGIES

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REMARKS

Claims 14-35 having been added, the pending claims are claims 1-35.

New claims 14-35 are supported by originally filed claims 11-13; and throughout the specification, particularly at page 6, line 15 through page 7, line 23; page 11, lines 30-32; pages 17-18; page 20, lines 3-15; page 38 and by the Examples.

When the Examiner takes the application up for the first Office Action, consideration of these amendments and remarks is respectfully requested.

Respectfully Submitted,

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